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Mathematical modelling of Hepatitis B and C viral kinetics and applications

Abstract

During the last 12 years, mathematical compartment models for Hepatitis B and C viral kinetics have become an established tool in clinical research. The proposed models base on ordinary differential equation systems and have been applied to model viral kinetics during antiviral treatment in patients chronically infected with Hepatitis B and C. The models describe biological processes in the body of individual patients and are well suited for an early assessment of treatment efficacy and virologic treatment response. In this talk, we will present such mathematical models and their application on clinical data. Additionally, we indicate further refinements.